

5120907



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

Split 21
DAS
21
9-89

D6025-120
Job Sheet 174302

Accounting Job RD17-1027-01



Part No: D6025-120

Job Qty: 25 ea

Part Name: Crosstube Material



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 3/13/18

Job Tracking No:

Due Date: 7/31/18

Created By: Steven Hemmerich

Type: Rework

Description:

Note: TBD D6025 REV.C IPP REV:A 16.09.16 NEW ISSUE DD VERF:JFS IPP REV:B 17.12.14 AS PER DWG
REV.C DD VERF:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	25 pcs		7/30/18	0.00	0.00	Purchasing		AT/18/10/24
110	Packaging	25 pcs		7/30/18	0.00	0.00	Packaging2		AT/18/10/24
120	QC	25 pcs		7/30/18	0.00	0.00	QC18		AT/18/10/24
130	HandFinish	25 pcs		7/31/18	0.00	8.33	HandFinish1	N/A	
135	QC	25 pcs		7/31/18	0.00	0.00	QC7-5	N/A	
140	Packaging	25 pcs		7/31/18	0.00	0.00	Packaging3-2		
150	QC21-SA	25 Ea		7/31/18	0.00	0.00	QC21		JUN 10 2019

Part Op 100 - Issue P/O 039197 (D6025-120) A) Extrude crosstube material as per Dwg D6025 B) Material certification is required *** EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS.*** MUST BE WELL PACKAGE, IF NOT IT WILL BE REFUSE***
110 - Ensure material certification is attached
120 - Ensure Material certification comply to Dwg D6025
140 - LOCATION : LG003

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6025-120P	Crosstube Material	25 pcs (1 ea) 21	100-Purchasing	5120787

Job Allocations

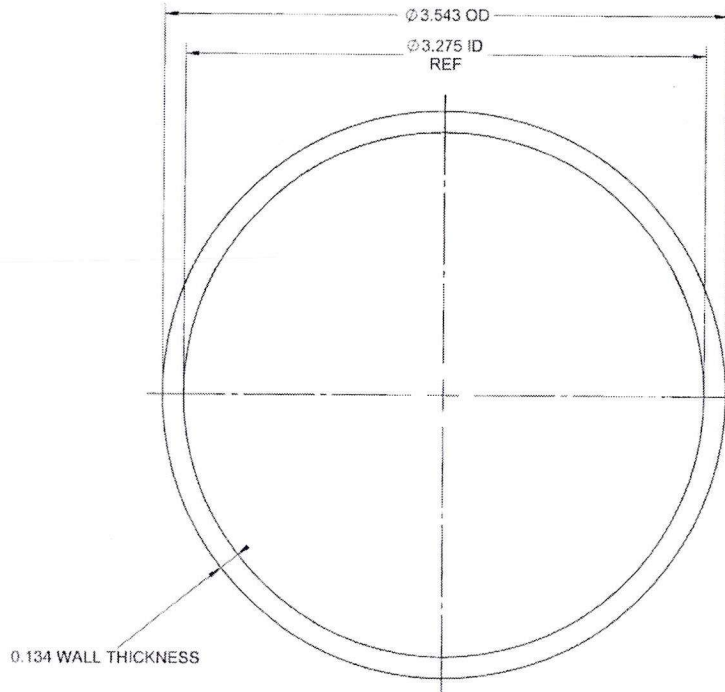
Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	D6025-120P	25	0	0

Part Specifications

Specifications could not be found.

Plex 3/13/18 1:50 PM dart.hemmerich.steven

SPECIFICATION CONTROL DRAWING



D6025-XXX CROSSTUBE MATERIAL

WHERE XXX IS LENGTH IN INCHES
EG. 103" LONG TUBE: D6025-103

NOTES:

- 1) MATERIAL: 3.543 OD X 0.134 WALL 7075-T73 / T73510 / T73511 WW-T-7007 OR QQ-A-225/9 OR QQ-A-200/11 OR ASTM B210 OR ASTM B241) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 66 KSI
MINIMUM YIELD TENSILE STRENGTH = 56 KSI
MINIMUM ELONGATION = 12%
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO SENDING THE EXTRUSION TO AN OUTSIDE VENDOR
- 3) TOLERANCES: O.D.: +/- 0.008 MEAN (+/- 0.016 INCLUDING OVALITY)
WALL: +/- 0.006 MEAN (+/- 0.013 INCLUDING ECCENTRICITY)
LENGTH: XXX +0.500/-0.000
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A
- 8) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

DESIGN	ML	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D6025 TITLE CROSSTUBE MATERIAL REV. C SHEET 1 OF 1 SCALE NTS	
DRAWN	ML		
CHECKED	AJS		
MFG. APPR.	LL		
APPROVED	WM		
DE APPR.	CP	DATE 17.05.25	
DATE			
REV.	DESCRIPTION	BY	DATE
C	UPDATE MATERIAL PROPERTIES, TOLERANCES AND ADD CHEMICAL CONVERSION COAT	ML	17.05.25
B	ADDED NOTE 9	ML	17.01.20
A	NEW ISSUE	ML	16.03.24

RELEASED
2017-08-01
Ecn 17-667

APPROVED

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D6025-120

EXTRUSION INSPECTION SHEET



		3.535-3.551 SIDE A		SIDE B		Measurement unit Inches		Symbol "		ULTRA SONIC MEASUREMENTS				
TUBE #	TOTAL LENGTH	DIA		DIA		INSIDE DIA	wall thickness measured w/vern	Strightness at 12" in middle	Rockwell Reading	LOCATION on tube	R1	R2	R3	R4
		R1	R2	R1	R2									
DWG									N/A	Middle	N/A			
1	120"	3.5395	3.5395	3.5345	3.525	3.282	0.131	0.133		N/A	Middle			
2	120"	3.5335	3.5355	3.5385	3.5380	3.272	0.1335	0.132		N/A	Middle			
3	120"	3.5365	3.5398	3.540	3.541	3.274	0.131	0.1325		N/A	Middle			
4	120"	3.5405	3.5385	3.5375	3.541	3.283	0.131	0.1325		N/A	Middle			
5	120"	3.541	3.539	3.540	3.539	3.280	0.134	0.134		N/A	Middle			
6										N/A	Middle			
7										N/A	Middle			
8										N/A	Middle			
9										N/A	Middle			
10										N/A	Middle			
11										N/A	Middle			
12										N/A	Middle			
13										N/A	Middle			
14										N/A	Middle			
15										N/A	Middle			
16										N/A	Middle			
PART #		P/O#				BATCH #				Notes:				



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO039197

Supplier: ALU001-VU
Aluminiumwerk Unna AG
630-3033 SOUTH PARKER RD
AURORA, CO 80014 USA
Phone: 303 755 5672
Fax: 303 755 5936

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: PO039197

PO Date: 3/5/18

Due Date:

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Hemmerich, Steven
Phone: 613-632-5200 Ext: 281
shemmerich@dartaero.com

Via: Journey Freight

Pymt Terms: Net 30

Freight Terms:

Special Comments: *****EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS.*****

MUST BE WELL PACKAGED, IF NOT IT WILL BE REFUSED

*****ELONGATION PROPERTIES FOR MATERIAL MUST BE 12% OR GREATER.

C OF C IS REQUIRED

Items

Line Item	Part	Supplier Part No	Item No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	D6025-120P			Crosstube Material. As per drawing D6025 RevC	Firmed	6/5/18	25 pcs 29	0 pcs 24	25 pcs	\$401.00/pcs At 13/10/24	\$10,025.00
Line Item Note Temper to T73, T73510 or T73511											
2	D6027-115P			Crosstube Material	Firmed	6/5/18	19 pcs 24	0 pcs 24	19 pcs	\$533.00/pcs At 13/10/24	\$10,127.00
Line Item Note Temper to T73, T73510 or T73511											
3	D6026-110P			Crosstube Material	Firmed	6/5/18	16 pcs 18	0 pcs 18	16 pcs	\$466.00/pcs At 13/10/24	\$7,456.00
Line Item Note Temper to T73, T73510 or T73511											
Grand Total:											\$27,608.00

Order Notes

Order Notes

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.



Plex 3/7/18 10:04 AM dart.hemmerich.steven

Packing List Aluminiumwerk Unna AG

Page 1 of 1



ALUMINUM

Order		Article		Box marking							
Commission-No.:	70411	Outer Diameter (Inch):	3,543	DART AEROSPACE /							
Item No.:	100	Inner Diameter (Inch):	3,275	P.O. 39197/ D6025-120							
Customer PO:	PO39197	Wall (Inch):	0,134	MADE IN GERMANY /							
Customer:	Dart Aerospace	Length (Feet):	10,00	DEST.: HAWKESBURY ONT, CANADA							
Date:	08.08.2018	Drawing:	89,99 x 3,4								
Comments: We hereby declare, that the wooden packing material are totally free from bark and apparently free from live plant pests.											
Box No.	Box dimensions			Total number of pieces and weights			Cast/Heat-Groups in the box				
	Length (Inch)	Width (Inch)	Height (Inch)	Pieces	Net lbs	Tare lbs	Gross lbs	Position	Pieces	Cast-No.	Heat-No.
1	125,984	22,441	22,441	23	392,422	171,96	564,383		23	8595	1308864
2	125,984	22,441	22,441	6	101,413	187,393	288,805		6	8595	1308864
Total:			2,08	29	493,835	359,356	853,188		29		

Abnahmeprüfzeugnis 3.1 - DIN EN 10204:2005

Inspection Certificate 3.1 - DIN EN 10204:2005 / Certificat de Reception 3.1 - DIN EN 10204:2005

Kunde:
Client:

Dart Aerospace Ltd.
1270 Aberdeen Street
K6A1K7 Hawkesbury, ON Canada

Zeugnisnummer: 1462/18
Cert No.: / No. du certificat:

Bestellnummer:
Order No. / No. de commande

Auftrag: 70411/100

Our Reference/Notre Reference:

Produkt:

Product / Produit:

Spezifikation:

Specification:

Werkstoff:

Alloy/Alliage:

Abmessung

Size / Dimension

Kennzeichnung

Marking/Marquage:

Rohre nahtlos gepresst und gezogen
Tubes seamless extruded and drawn
AMS - WW - T - 700/7A; Spezifikation Dart Aerospace LTD. (elongation 12%)

7075

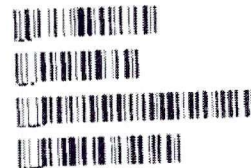
Zustand:

Temper/Etat

T 73

3,543 INCH x 3,275 INCH x 0,134 INCH x 120,000 FEET
D0625-120P

ALUnna - Cert No. 1462/18 - AMS WW-T-700/7A - 3.543" OD x 0.134" WT - 7075 - T 73 - Cast No. 8595 - Heat Lot No. 1308864 -
ALUnna Order Confirmation No. 70411/100 - P.O. 39197



Lieferung

Delivered Material / Matériel délivré:

pcs.

lbs

Country of Manufacture: Germany

29

494

Products are in accordance with applicable RoHS

1. Chemische Analyse

Chemical Analysis / analyse chimique

Charge/ min.	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni	Na
Cast No. max.	0,40	0,50	2,0	0,30	2,9	0,28	6,1	0,20						
8595/18	0,098	0,155	1,499	0,049	2,335	0,202	5,688	0,048	0,0030	0,0370	0,0001	0,0018	0,0050	0,0001

Hydrogen content: 0,15

ccm / 100 g Al

Elements without indication < 0,01 %

country of melt manufacturer: Germany

2. Mechanische Eigenschaften

Mechanical Properties / Valeurs Mécaniques

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	electrical conductivity (IACS)
	66,0	56,0	12,0			
1	74,7	64,9	12,2			38,6

max. RMS 25 - max. 9,8 µ"

Ergebnis der Prüfungen:

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results:

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats:

Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

mergardtri

09.08.2018

Certified acc. DIN EN ISO 9001:2015 and DIN EN 9100:2016
valid until 2019-11-10

TÜV Nord - Cert. - Req. No.: 44 100 131576 and 44 117 131576

Aluminiumwerk Unna AG, Uelzener Weg 36, 59425 Unna, Germany



ALUnna

Abnahmebeauftragter

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D6025-120
DATE: 18/10/24

PO / BATCH NO.: P00391975120907

MATERIAL CERT REC'D: Yes
QUANTITY RECEIVED: 29
QUANTITY INSPECTED: 29
QUANTITY REJECTED: 0

THICKNESS ORDERED: _____
THICKNESS RECEIVED: _____
SHEET SIZE ORDERED: —
SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y ☒ N ☒	
CORRECT FINISH	☒ Y ☒ N	
CORROSION	Y ☒ N ☒	
CORRECT GRAIN DIRECTION	☒ Y ☒ N	
CORRECT MATERIAL PER M-DRAWING	☒ Y ☒ N	AMS WW-T-702/7
CORRECT THICKNESS	☒ Y ☒ N	
PHOTO REQUIRED	Y ☒ N ☒	
CORRECT REF # TO LINK CERT	☒ Y ☒ N	P0039197
CORRECT MATERIAL IDENTIFICATION	☒ Y ☒ N	
CORRECT M# ON THE MATERIAL	☒ Y ☒ N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y ☒ N ☒	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y ☒ N ☒	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/10/24</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in